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Amendments to the Specification:

Please amend the claims as follows:

1. (original) A method for identifying signal sources is a multisource signal area comprising:

detecting a plurality of signals from a plurality of base station towers in a coverage area;

measuring said plurality of signals from a plurality of locations in said coverage area;

determining geographic coordinates of said plurality of locations;

wherein said plurality of signals comprises a base station tower identifier that corresponds to a base station tower from which a particular signal originates;

wherein measuring said plurality of signals from said plurality of locations further comprises measuring a relative signal delay that corresponds to a relative distance of a given base station tower from a given location;

creating timing relationships for the base station tower in said coverage area by creating at least one histogram of said relative signal delay; and

producing a geographical data base of signal components from said plurality of base station towers that is clear of co-channel interference and adjacent-channel interference.

2. (original) The method for identifying signal source as in claim 1, wherein the measuring of said plurality of signals is accomplished in a multiple frame window.

3. (original) The method for identifying signal source as in claim 2, wherein said multiple frame window is 10 frames.

4. (original) The method for identifying signal source as in claim 2, wherein said multiple frame window is 51 frames.

5. (original) The method for identifying signal source as in claim 1, further comprising producing a reading of an absolute level of correlated power and relative time of arrival for each signal in said plurality of signals.

6. (original) The method for identifying signal source as in claim 1, wherein determining geographic coordinates for said plurality of locations comprises using a GPS system.

7. (original) The method for identifying signal source as in claim 1, wherein said base station towers are synchronized by a common core network.

8. (original) The method for identifying signal source as in claim 7, wherein said base station towers have no appreciable drift relative to each other.

9. (original) The method for identifying signal source as in claim 1, wherein measuring the plurality of signals from a plurality of locations comprises driving to the plurality of locations.

10. (original) The method for identifying signal source as in claim 1, further comprising measuring said plurality of signals without interrupting said plurality of signals.

11. (original) A method for identifying signal sources is a multisource signal area comprising:

detecting a plurality of signals from a plurality of base station towers in a coverage area;

measuring said plurality of signals from a plurality of locations in said coverage area;

wherein said plurality of signals comprises a base station tower identifier that corresponds to a base station tower from which a particular signal originates;

wherein measuring said plurality of signals from said plurality of locations further comprises measuring a relative signal delay that corresponds to a relative distance of a given base station tower from a given location;

creating a measurement of timing relations for said base station towers in said coverage area by using a processing algorithm that uses said relative signal delays; and

producing a geographical data base of co-channel interference strength between a given pair of base station towers from said plurality of base station towers.

~~11.~~12. (Amended) The method for identifying signal source as in claim 10, wherein a single base station tower of said plurality of base station towers is used as a reference for said relative signal delay.

~~12.~~13. (Amended) The method for identifying signal source as in claim 10, further comprising using said geographical data to analyze a signal in said coverage area to identify signal components.

~~13.~~ 14. (Amended) The method for identifying signal source as in claim 12, further comprising using said analysis is used to calculate at least one of frequency planning, co-channel interference, adjacent-channel interference, mapping of said signal and optimization of said signal.

~~14.~~15. (Amended) The method for identifying signal source as in claim 10, further comprising taking a second set of measurements in said coverage area and using and said analysis to create a database relating said second set of measurements to power level of said base station towers.

~~15.~~16. (Amended) The method for identifying signal source as in claim 10, further comprising measuring said plurality of signals without interrupting said plurality of signals.

~~16.~~17. (Amended) The method for identifying signal source as in claim 10, wherein the measuring of said plurality of signals is accomplished in a multiple frame window.

~~17.~~18. (Amended) The method for identifying signal source as in claim 16, wherein said multiple frame window is 10 frames.

~~18.~~19. (Amended) The method for identifying signal source as in claim 16, wherein said multiple frame window is 51 frames.

~~19.~~20. (Amended) A method for determining power level of base stations in a coverage area with a plurality of base station towers comprising:

compiling a set of measurements of received signals in said coverage area from a plurality of locations; and

comparing said set of measurements to a database;

wherein said database contains a geographical distribution of co-channel interference strength between given pairs of said base station towers among said plurality of towers, said geographical distribution being produced by comparing relative time of delay signals in said area of coverage using station tower identifiers.

~~20.~~21. (Amended) A method for measuring co-channel interference and interference component separation based on statistical signal processing comprising:

performing at least one drive test in a sample area containing a plurality of base tower stations that are transmitting a plurality of signals each with a known burst waveform;

receiving said plurality of signals;

correlating said plurality of signals using said known burst waveform;

determining a time of arrival for each signal in said plurality of signals;

recording said determination in a database;

identifying each signal from the correlation of said plurality of signals;

building a histogram based on differences in said time of arrival for each signal; and

listing a time delay for each identified signal.

~~21.~~22. (Amended)The method of claim 20, further comprising querying said database for each of said time delays and identifying pairs of interfering base tower stations among said plurality of base tower stations.